

FUNCTIONAL FAILURE ANALYSIS TECHNIQUES FOR PROGRAMMABLE INTEGRATED CIRCUITS

ABSTRACT OF THE DISCLOSURE

[0056] Techniques are provided for isolating failed routing resources on a programmable circuit. Failing test patterns and the test logs are fed to a Statistical Failure Isolation (SFI) tool. The SFI tool extracts failing paths from the test patterns. A statistical analysis is performed on interconnect resources related to failing paths. The resources on the paths are then tallied to create a histogram of resources. These resources are then fed into an Adaptive Failure Isolation (AFI) tool to auto-generate verification patterns. A tester uses the verification patterns to isolate failed interconnect resources.

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